

Curriculum Vitae

Jason Seth Krumholz

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Personal Statement

I seek an interdisciplinary position which will put my background in ocean sciences, marine policy, and education to work facilitating conservation, restoration, and sustainable management of marine ecosystems.

Research Program Focus

My dissertation research focuses on the impact of advanced wastewater treatment on water quality and nutrient mass balance. I also have extensive experience in coral reef, mangrove, and oyster restoration techniques. Secondary interests include: environmental impact assessment, habitat restoration, mitigation, and fisheries science, including quantitative fisheries dynamics.

Education

May, 2012 **Ph.D Oceanography** URI, Graduate School of Oceanography, Narragansett, RI
Dissertation: Changes in nutrient dynamics with onset of tertiary wastewater treatment in Narragansett Bay, RI.
May, 2009 **M.M.A. Marine Affairs** University of Rhode Island, Kingston, RI
Thesis: Fishing or Catching? A review of modern trends relating to the status of global fisheries.
May, 2001 **B.A. Biology** Lawrence University, Appleton, WI.
Honors for G.P.A. and independent research 3.45 GPA

Current Appointments

6/2012 – Current. **Liaison Ecologist- Long Island Sound Study** NOAA/NMFS
Work with academic, government and non-profit scientists and managers to co-ordinate research program for EPA Long Island Sound Study and implement science based management objectives.

1/2010 – Current. **Intern/Associate Scientist/Scientific Coordinator** The Reef Ball Foundation
Review experimental design, project layout, and monitoring plans for oyster, mangrove, and reef restoration. Conduct site assessments, train staff and volunteers, write and edit reports and proposals. Compiled Grassroots Reef Restoration manual.

09/2004-9/2005 & 9/2008 –05/2012. **Graduate Research Assistant** U.R.I./GSO
Collect and process samples for nutrients, DIC/DOC, C-14 productivity, chlorophyll, and oxygen. Analyze data, assist with grant and report writing, present data at meetings.

2007 – Current. **Curriculum Development Consultant** National Science Teachers Association
Write, edit, and provide support for online ocean science, ecology, and biological science content

Previous Appointments

2007 – 2010. **TDI/SDI Assistant Instructor** URI Department of Fisheries, Ag. & Vet. Sciences
Assist with TDI/SDI Open water certification (AFS270) and AAUS scientific diving methods (AFS433) courses

9/2007 – 5/2008 **Graduate Teaching Assistant** URI/GSO
Assisted with lecture preparation, wrote and graded homework and exams, led review/discussions for OCG110 'The Blue Planet' and OCG 451 'Oceanographic Science' courses.

9/2005 – 9/2007 **NSF IGERT project Fellow** Coastal Institute, University of Rhode Island
Participate in fellowship designed to integrate multiple disciplines towards developing solutions to coastal ecosystem science. Conduct fieldwork and training in Narragansett Bay, RI, Cape Cod, MA, and Baltimore, MD. Participate in workshops on communication, outreach, leadership, and interdisciplinary problem solving.

9/2001 – 8/2004 **Sales & Leasing Consultant** Bergstrom Premier Motorcars, Appleton, WI
Responsible for sales and customer service on new and used Jaguar, Land Rover, and Volvo vehicles.

Related Skills/Background

- **Excellent report writing and analytical skills:** Have written reports for government agencies, non-profits, and a wide range of private clients, demonstrating my ability to multi-task and work within deadlines.
- **Strong management background:** Supervised 12+ undergraduate research assistants (4 of which presented or published their work in a peer reviewed format), and led teams of 2-7 volunteers and staff on domestic and international projects. 8+ years of management experience.
- **Polished communicator:** Professional training through sales background and NSF IGERT program in scientific communication, negotiation, and conflict resolution. Experience writing press releases, giving audio and video interviews, and presenting research to scientific and general audiences.
- **Extensive grant writing and budgeting experience:** Have successfully written, edited, and assisted with grant applications to local, state, federal, and international government agencies, as well as private or industry RFP's. Experience managing laboratory, field project, and grant budgets ranging from \$500-\$500,000.
- **Proven publication record:** Six peer reviewed (four first author) publications ranging from original research papers to white papers, to encyclopaedia articles. Two additional manuscripts in press or in peer review and three in preparation.
- **Industry Experience:** Four years of commission based sales experience and several contract consulting positions for industry and non-profit clients during graduate school provide familiarity of life outside academia above most recent graduates.

Field and Laboratory Skills

Laboratory Skills:

- Colorimetric Segmented Flow Nutrient Analysis
- Chlorophyll/Fluorescence
- ^{14}C & O_2 primary productivity analysis
- Spectrophotometric and titrated dissolved O_2
- CHN, TSS, DOC/TOC analysis
- Benthic community analysis
- CTD ops and data processing (YSI & Seabird)
- Radioactive and Haz. Mat. safety training
- 7+ years experience in calibration, maintenance, QA/QC, and laboratory management

Field Skills:

- New England & Caribbean fish/invertebrate ID
- Basic instrument and boat maintenance skills
- Red Cross CPR/First Aid/ AED/emergency O_2
- Scientific fishing experience including otter and beam trawls, pot fishing, mark/recapture
- Certified in mangrove restoration (CRG) and coral transplant & rescue (Reef Ball Foundation)

SCUBA/Boating Related Skills:

- TDI/SDI Assistant Instructor
- AAUS Scientific diver
- URI/U.S. Power Squadron small boat certified
- UVC techniques (transect and roving)
- Underwater instrument maintenance, search and recovery, and experiment deployment.

Computer Skills

MS Office (Word, Powerpoint, Excel, Outlook, Publisher), Graph Pad, FasPac, EndNote, ArcGIS, Matlab, Sigmaplot, R, Primer, SAS, Dreamweaver, Sketch-Up, Google Earth, COREMO, Open Office

Honors and Awards

2012: Coastweeks Invited Speaker **2012:** AAUP travel award **2011:** Graduate School of Oceanography Alumni Award **2010:** Coastal Resources Group scholarship to attend mangrove restoration workshop **2010:** CIIP IGERT grant-in-aid for dissertation improvement **2008:** URI GSA award to present research at RAE conference **2008:** URI Alumni Association travel grant to attend ASLO conference **2008:** CIIP IGERT Grant-in-aid to pursue coral transplant research in BVI **2007:** Thomas and Kathy McNiff Award for Excellence in Oceanography **2006:** AAAS Excellence in Science Sponsorship **2005:** Robert Lloyd Fellowship from RI Surfrider **2005:** NSF IGERT Fellowship in Coastal Management and Policy **2004:** Alumni Fellowship to attend University of Rhode Island, GSO **1998-2001:** Lawrence University Trustee scholarship for tuition.

Synergistic and Outreach Activities

Contributing Author, Biomes and Ecosystems: An Encyclopedia. R.W. Howarth Ed. Salem Press (2013)
Science Advisory Committee, Roger Williams Park Pond Restoration (2010-2013)
Session Co-Chair, CERF conference, Daytona Florida. November 6-10 2011
Peer Reviewed Manuscripts for: Human Ecology Review, Journal of Environment and Ecology
Reviewed student posters at: ERF, CERF, RAE, NEERS, and ASLO conferences
2005-present: Outreach Scientist. URI Office of Marine Programs
2005-present: Judge and Question Writer, Consortium for Ocean Leadership/NOSB
2006-2009: Volunteer Diver/Educator, Mystic Aquarium, Mystic CT.
2004-present: Chowder and Marching Society, 2006-2009: Public Relations Officer

Peer Reviewed Publications

Krumholz, J.S. in Howarth, R.W. ed. 2013. Encyclopedia of Biomes and Ecosystems. Salem Press 1440pp.
ISBN: 978-1-4298-3813-9
Krumholz, J. S. 2011. Quantifying and Monitoring Ecological Response to No-Take Marine Reserves. Journal of Environment and Ecology **2**:E3.
Forrester, G. E., P. Baily, L. M. Forrester, S. Giovannini, L. Harmon, R. Karis, **J. Krumholz**, C. O'Connell-Rodwell, T. Rodwell, and L. Jarecki. 2010. Evaluating Methods for Transplanting Endangered Elkhorn Corals in the Virgin Islands. Restoration Ecology:8.
Krumholz, J. and T. Barber. 2011. Reef Balls. Pages 234-237 in D. Hopley, editor. Encyclopedia of Modern Coral Reefs. Springer, New York.
Krumholz, J., T. Barber, and C. Jadot. 2010. Avoiding band-aid solutions in ecosystem restorations. Ecological Restoration **28**:17-19.
Krumholz, J and C. Jadot. 2009 Demonstration of a new Technology for Restoration of Red Mangrove (Rhizophora mangle) in High Energy Environments. Marine Technology Society Journal. 43(1) 64-72.
Barber, T., T. Maher, and **J. Krumholz**. 2007. A Step-by-step guide for Grassroots Efforts to Reef Restoration. Athens, GA. A Reef Ball Foundation Publication. 403pp.

Selected Conference Presentations

Krumholz, J., C.A. Oviatt and L.M. Smith, 2011. Patterns in Nutrient Standing Stocks and Mass Balance in Narragansett Bay, RI, with Onset of Loading Reductions. CERF. November 6-10 2011. Daytona FL.
Barber, T., B. Chisholm, C. Jadot, K. Kirbo, **J. Krumholz**, and D. Lennon. 2010. Artificial Reef Optimization using Google Earth as a Collaborative Platform for Mitigation, Monitoring, and More. 8th Florida Artificial Reef Summit. January 21-23 2010. Cocoa Beach FL. www.flseagrant.org
Dionne, D., **J. Krumholz**, and C. Oviatt. 2009. Estimating changes in nutrient input into Narragansett Bay: past and present. URI Coastal Fellows Symposium, Kingston RI. December 14, 2009
Barber, T, **J. Krumholz**, J. Walch, C. Jadot, L. Harris, and T. Maher. 2008. A step-by-step guide for grassroots efforts to reef rehabilitation. 11th ICRS, Tampa FL, June 6-8 2008.
Krumholz, J., T. Barber, C. Jadot, and H. Williams. 2008. Development of a Restoration Technique for Red Mangroves in High Energy Environments. ASLO, Orlando FI, March 2-7, 2008.

Example Projects

Project Leader, Lee County Mangrove Beta Project, June-November 2011

Worked with a private client to design and implement an experimental mangrove restoration project in Ft. Meyers Florida. Deployed 20 restoration units in initial project phase, November 2011. The project is a functional restoration while testing the tolerance of two different high energy mangrove restoration techniques to increasing water depth. While the restoration of intertidal mangrove communities, especially in low energy environments, has a relatively well established set of 'best practices', high energy and subtidal restorations, which highly desirable from an ecosystem services perspective, remain challenging and poorly understood. This project creates a 'win-win' partnership between *Mangrove Solutions* (a nonprofit mangrove restoration organization) and a private donor/client who has made several failed attempts to establish mangroves on his shoreline property using traditional methods, and was willing to provide site access and funding for the initial deployment and continued monitoring.

Project Team Co-Leader, Montserrat Reef Project, December 2010

Co-led a team of 5 (3 trainers, 2 volunteer interns) staff on a United Kingdom Overseas Territories Environmental Program (UK OTEP) funded demonstration scale restoration project to rehabilitate areas of coral reef destroyed by the eruption of Montserrat's Soufriere Hills volcano. Our team provided guidance and training to local grassroots organizations (primarily SCUBA Montserrat and the Montserrat Reef Society) in best practices for coral rescue and transplant of imperiled coral colonies and completed a demonstration scale restoration, transplanting approximately 200 coral colonies (11 species) onto Reef Ball artificial reefs. This project has recently received a second round of funding from OTEP and will be scaling up to include additional coral transplant in an area subject to potential damage from a pier renovation and a possible mangrove restoration. Project also resulted in a short peer reviewed manuscript currently submitted to *Coral Reefs* based on monitoring work in nearby Antigua.

Curriculum Development Consultant, National Science Teachers Association, May 2007-present

Responsible for content review of new middle and high school level curriculum units on ocean, climate and atmospheric science, ecology, evolution, and general biology. Developed professional development indexing (PDI) system for self assessment to guide users (teachers) in identifying weaknesses in their knowledge base within subject areas and guide them to appropriate enrichment modules. Provide ongoing support for development of new units as well as online support for users and classrooms with questions on curriculum units including e-mail support and occasional live webinars.

Field Team Leader, EPA National Coastal Assessment, May 2005-August 2006

Responsible for training and oversight of a team of 3 (2005) or 4 (2006) undergraduate interns for the collection and preliminary analysis of field samples associated with the EPA's National Coastal Assessment project which was contracted through our lab facility (The Marine Ecosystem Research Lab, MERL). Sampled approximately 20 stations per summer for water quality, water column nutrients, chlorophyll, suspended solids, sediment grain size and toxicity, and benthic and fish community analysis. Worked with another graduate student (who was primarily responsible for logistics) to ensure that all QA/QC requirements were met, all samples were processed appropriately, and all training and safety protocols were upheld.

References

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Professional References

Dr. Candace A. Oviatt Director, Marine Ecosystem Research
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Employer Contact Information

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Personal References

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